

REFERENCE: R-1015

PROJECT: 34360

CONTENTS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND
3	SITE PLAN
4	PROFILE
5	CROSS SECTION
6-9	BORE LOGS
10	SOIL TEST RESULTS
11	SITE PHOTOGRAPHS

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GEOTECHNICAL ENGINEERING UNIT

STRUCTURE  
SUBSURFACE INVESTIGATION

COUNTY CRAVEN

PROJECT DESCRIPTION US 70 (HAVELOCK BYPASS)  
FROM SOUTH OF CARTERET /CRAVEN COUNTY  
LINE TO SOUTH OF SR 1176

SITE DESCRIPTION BRIDGE NO. 0283 ON -Y4- (SR 1747  
SUNSET DRIVE) OVER -L- (US 70 HAVELOCK  
BYPASS) AT STA 44 + 71.82

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-1015	1	11

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

NOTES:

- THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
- BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

ES Setnicky

RM Bleifernich

JR Helms

BR Spiro

GW Stalls

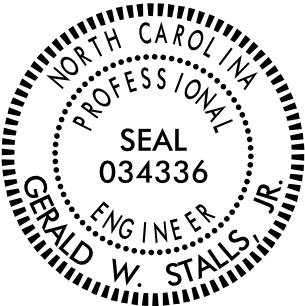
INVESTIGATED BY GET SOLUTIONS

DRAWN BY JR Helms; BR Spiro

CHECKED BY GW Stalls

SUBMITTED BY GW Stalls

DATE April, 2016



DocuSigned by:  
Gerald W. Stalls, Jr. 7/14/2016

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SIGNATURE

DATE

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

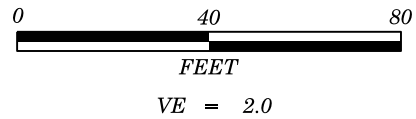
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

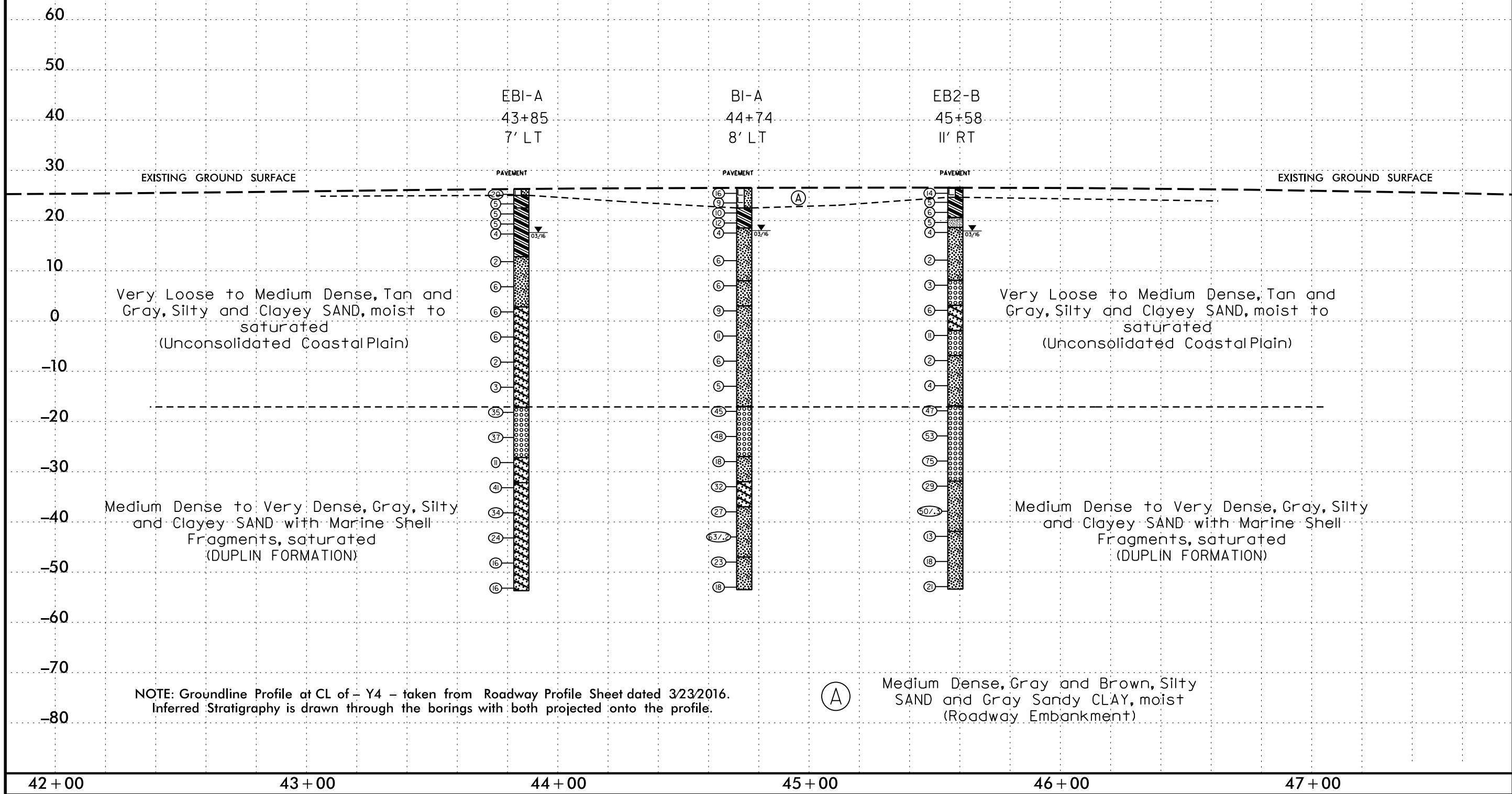
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION												GRADATION												ROCK DESCRIPTION												TERMS AND DEFINITIONS																																																																																																																							
SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE, <i>VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6</i>												WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. <u>GAP-GRADED</u> - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.												HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED. AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS IN NON-COASTAL PLAIN MATERIAL. THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:												ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. AQUIFER - A WATER BEARING FORMATION OR STRATA. ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND. ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC. ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE. CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE. CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK. DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL. DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH. FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL. FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM. FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD. JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED. LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT. LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS. MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE. PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM. RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK. ROCK QUALITY DESIGNATION (RQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK. SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK QUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.																																																																																																																							
SOIL LEGEND AND AASHTO CLASSIFICATION												ANGULARITY OF GRAINS												WEATHERED ROCK (WR)												CRISTALLINE ROCK (CR)												NON-CRYSTALLINE ROCK (NCR)												COASTAL PLAIN SEDIMENTARY ROCK (CP)																																																																																															
GENERAL CLASS.												THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.												NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.												FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.												FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.												COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.																																																																																															
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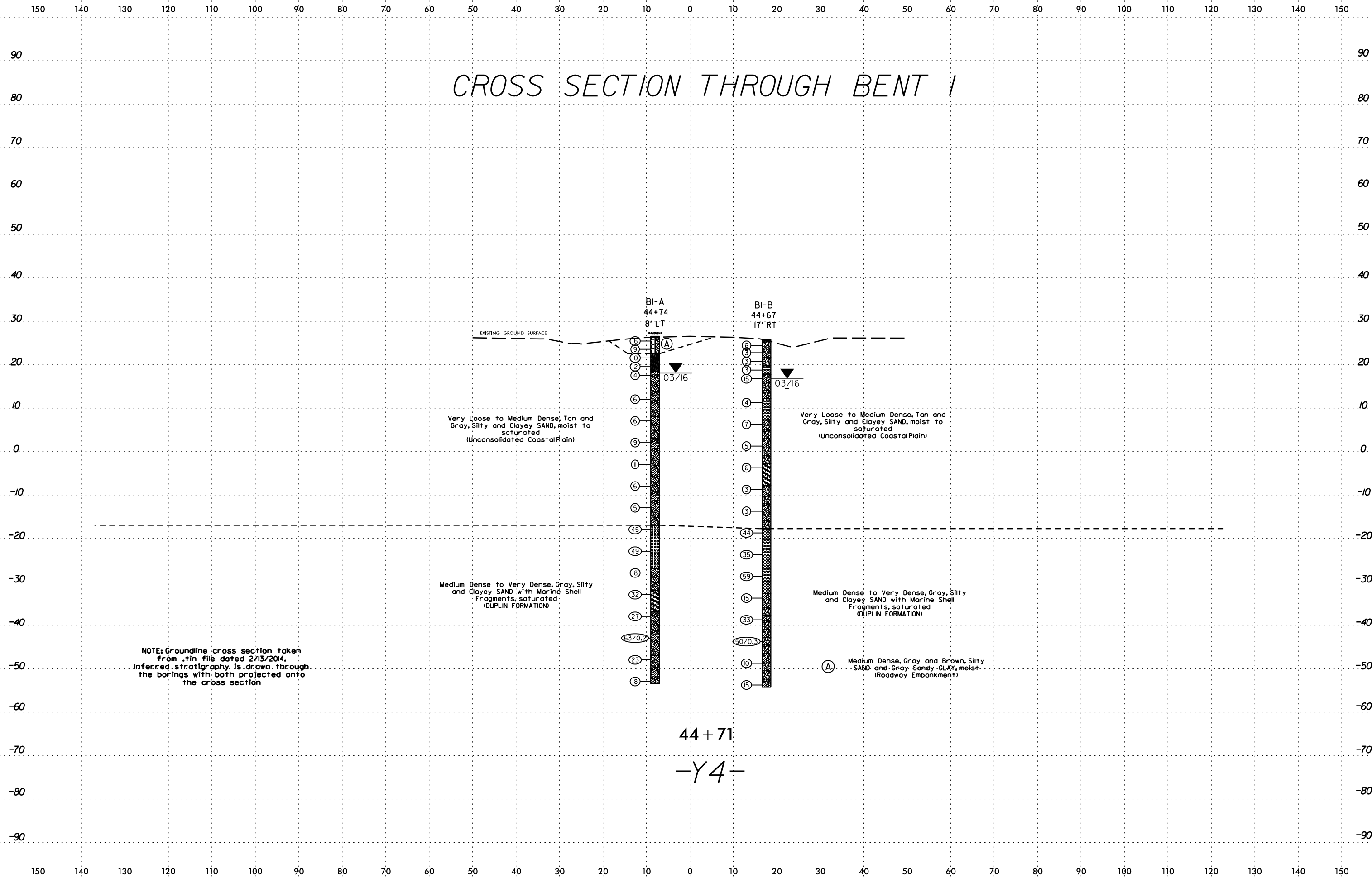


PROJECT REFERENCE NO.	SHEET NO.
R-1015	4
SUBSURFACE PROFILE ALONG -Y4- CENTERLINE	



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# CROSS SECTION THROUGH BENT 1



# **GEOTECHNICAL BORING REPORT**

## **BORE LOG**

WBS 34360.1.2			TIP R-1015			COUNTY CRAVEN			GEOLOGIST Blierneich, R.							
SITE DESCRIPTION BRIDGE NO. 0283 ON -Y4- (SR 1747 SUNSET DRIVE) OVER -L- (US HAVELOCK BYPASS) AT STA 44+71.8												GROUND WTR (ft)				
BORING NO. EB1-A			STATION 43+85			OFFSET 7 ft LT			ALIGNMENT -Y4-			0 HR. 8.0				
COLLAR ELEV. 26.4 ft			TOTAL DEPTH 80.0 ft			NORTHING 418,520			EASTING 2,617,108			24 HR. 8.7				
DRILL RIG/HAMMER EFF./DATE GET7255 CME-55 80% 01/04/2016						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic							
DRILLER Donahue, T.			START DATE 03/24/16			COMP. DATE 03/24/16			SURFACE WATER DEPTH N/A							
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)	
30																
	26.3	0.1														
25																
	24.4	2.0	3	12	8											
	22.4	4.0	3	3	2											
	20.4	6.0	2	2	3											
20			1	2	3											
	18.4	8.0	1	2	2											
15																
	12.9	13.5	1	1	1											
10																
	7.9	18.5	4	4	2											
5																
	2.9	23.5	3	3	3											
0																
	-2.1	28.5	WOH	3	3											
-5																
	-7.1	33.5														
-10			2	1	1											
	-12.1	38.5														
-15			1	1	2											
	-17.1	43.5	17	16	19											
-20																
	-22.1	48.5	14	19	18											
-25																
	-27.1	53.5	5	5	6											
-30																
	-32.1	58.5	28	27	14											
-35																
	-37.1	63.5	16	17	17											
-40																
	-42.1	68.5	10	11	13											
-45																
	-47.1	73.5	5	8	8											
-50																

SS-2	20% M M M M W	PAVEMENT SURFACE 0.1' of Asphalt Pavement ROADWAY EMBANKMENT Non Plastic, Gray-Brown, Silty Fine SAND with a Little Organic Clay UNDIVIDED COASTAL PLAIN Medium Plasticity, Gray-Brown, Clayey Fine to Coarse SAND with trace Silt UNDIVIDED COASTAL PLAIN Medium Plasticity, Gray-Brown, Clayey Fine SAND with Silt
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NCDOT BORE DOUBLE R1015\_GEO\_BH\_BRDG0283.GPJ NC\_DOT.GDT 6/8/16



GEOTECHNICAL BORING REPORT  
BORE LOG

WBS 34360.1.2			TIP R-1015			COUNTY CRAVEN			GEOLOGIST Bliefertich, R.						
SITE DESCRIPTION BRIDGE NO. 0283 ON -Y4- (SR 1747 SUNSET DRIVE) OVER -L- (US HAVELOCK BYPASS) AT STA 44+71.8									GROUND WTR (ft)						
BORING NO. B1-B			STATION 44+67			OFFSET 17 ft RT			ALIGNMENT -Y4-						
COLLAR ELEV. 25.8 ft			TOTAL DEPTH 80.0 ft			NORTHING 418,532			EASTING 2,617,193						
DRILL RIG/HAMMER EFF./DATE GET7255 CME-55 80% 01/04/2016						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic						
DRILLER Donahue, T.			START DATE 03/24/16			COMP. DATE 03/24/16			SURFACE WATER DEPTH N/A						
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)
30															
25	25.5	0.3												25.8	0.3
	23.8	2.0	4	3	3										
	21.8	4.0	1	1	2										
20	19.8	6.0	1	2	1										
	17.8	8.0	2	2	1										
			4	8	7										
15															
	12.3	13.5	2	2	2										
10	7.3	18.5													
			3	3	4										
5	2.3	23.5													
			1	1	4										
0	-2.7	28.5													
			3	3	3										
-5	-7.7	33.5													
			4	2	1										
-10	-12.7	38.5													
			2	2	1										
-15	-17.7	43.5													
			13	19	25										
-20	-22.7	48.5													
			13	17	18										
-25	-27.7	53.5													
			18	32	27										
-30	-32.7	58.5													
			6	8	7										
-35	-37.7	63.5													
			17	17	16										
-40	-42.7	68.5													
			50/0.3												
-45	-47.7	73.5													
			5	5	5										
-50															

GROUND SURFACE

UNDIVIDED COASTAL PLAIN

0.3' of Topsoil

UNDIVIDED COASTAL PLAIN

Low Plasticity, Gray-Tan, Silty Fine SAND with Trace Clay and Trace Gravel and Trace Black Charred Organic Material

UNDIVIDED COASTAL PLAIN

Low Plasticity, Tan, Silty Fine SAND with Trace Clay

UNDIVIDED COASTAL PLAIN

Non Plastic, Tan, Fine to Medium SAND with Trace Silt

UNDIVIDED COASTAL PLAIN

Low Plasticity, Gray-Tan, Silty Fine SAND with Trace Clay and Trace Gravel and Trace Black Charred Organic Material

UNDIVIDED COASTAL PLAIN

Non Plastic, Gray-Tan, Fine to Coarse SAND with Trace Silt

UNDIVIDED COASTAL PLAIN

Non Plastic, Gray, Silty Fine SAND

UNDIVIDED COASTAL PLAIN

Low Plasticity, Gray, Silty Clayey Fine SAND

UNDIVIDED COASTAL PLAIN

Low Plasticity, Gray, Silty Fine SAND

COASTAL PLAIN

Non Plastic, Gray, Fine to Coarse SAND with Trace Silt and Marine Shell Fragments, "Duplin Formation"

COASTAL PLAIN

Non Plastic, Gray, Silty Fine to Coarse SAND with Few Clay and Trace Marine Shell Fragments, "Duplin Formation"

COASTAL PLAIN

Non Plastic, Gray, Silty, Fine to Coarse SAND with Trace Clay and Some Marine Shell Fragments, "Duplin Formation"

COASTAL PLAIN

Non Plastic, Gray, Fine SAND with Trace Silt and Clay, "Duplin Formation"

SPT Refusal Noted At 68.8 Feet with 50 Blows/0.3 Feet

WBS 34360.1.2			TIP R-1015			COUNTY CRAVEN			GEOLOGIST Bliefertich, R.					
SITE DESCRIPTION BRIDGE NO. 0283 ON -Y4- (SR 1747 SUNSET DRIVE) OVER -L- (US HAVELOCK BYPASS) AT STA 44+71.8									GROUND WTR (ft)					
BORING NO. B1-B			STATION 44+67			OFFSET 17 ft RT			ALIGNMENT -Y4-					
COLLAR ELEV. 25.8 ft			TOTAL DEPTH 80.0 ft			NORTHING 418,532			EASTING 2,617,193					
DRILL RIG/HAMMER EFF./DATE GET7255 CME-55 80% 01/04/2016						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic					
DRILLER Donahue, T.			START DATE 03/24/16			COMP. DATE 03/24/16			SURFACE WATER DEPTH N/A					
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
-50						Match Line								
	-52.7	78.5	8	7	8	15						W		COASTAL PLAIN Non Plastic, Gray, Fine SAND with Trace Silt and Clay, "Duplin Formation" (continued) Boring Terminated at Elevation -54.2 ft in Silty SAND (Duplin Formation)
								</						

NCDOT BORE DOUBLE R1015\_GEO\_BH\_BRDG0283.GPJ NC\_DOT.GDT 6/8/16

NCDOT BORE DOUBLE R1015\_GEO\_BH\_BRDG0283.GPJ NC\_DOT.GDT 6/8/16

WBS 34360.1.2			TIP R-1015			COUNTY CRAVEN			GEOLOGIST Setnicky, E.					
SITE DESCRIPTION BRIDGE NO. 0283 ON -Y4- (SR 1747 SUNSET DRIVE) OVER -L- (US HAVELOCK BYPASS) AT STA 44+71.8											GROUND WTR (ft)			
BORING NO. EB2-B			STATION 45+58			OFFSET 11 ft RT			ALIGNMENT -Y4-			0 HR.	8.0	
COLLAR ELEV. 26.7 ft			TOTAL DEPTH 80.0 ft			NORTHING 418,574			EASTING 2,617,274			24 HR.	8.7	
DRILL RIG/HAMMER EFF./DATE GET4354 CME-45C 81% 01/06/2016							DRILL METHOD Mud Rotary			HAMMER TYPE Automatic				
DRILLER Riddick, W.			START DATE 03/24/16			COMP. DATE 03/24/16			SURFACE WATER DEPTH N/A					
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
-50						Match Line								
	-51.8	78.5	4	9	12	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div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SOIL TEST RESULTS EB1-A															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-13	7 LT	43 + 85	48.5-50.0	A-1-b	NV	NP	84.0	11.2	0.6	4.2	99	32	5	17.7	-

SOIL TEST RESULTS B1-A															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-34	8 LT	44 + 74	58.5-60.0	A-2-6(1)	35	19	28.1	37.0	20.2	14.7	75	61	27	19.3	-

SOIL TEST RESULTS B1-B															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-53	17 RT	44 + 67	58.5-60.0	A-2-4(0)	NV	NP	23.4	54.6	12.2	9.8	86	70	21	22.0	-

SOIL TEST RESULTS EB2-B															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-59	11 RT	45 + 58	2.0-3.5	A-6(6)	40	22	22.1	34.9	4.8	38.2	100	97	45	20.4	-
SS-74	11 RT	45 + 58	68.5-70.0	A-2-4(0)	NV	NP	1.0	84.4	5.2	9.4	100	100	18	34.5	-

# SITE PHOTOGRAPHS

PROJECT REFERENCE NO.

SHEET NO.

R-1015

11

VIEW ALONG SR 1747 (SUNSET DRIVE)  
FROM EBI-A TO EB2-B



VIEW ALONG SR 1747 (SUNSET DRIVE)  
FROM EB2-B TO EBI-A

